

# Rhodora

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## SOME NEGLECTED NAMES IN WALTER'S FLORA CAROLINIANA.

S. F. BLAKE.

THE first general descriptive flora of any part of the United States using the binomial system was Walter's *Flora Caroliniana*, published at London in 1788 by John Fraser, who had met Walter in Carolina in 1785 and brought back to England the manuscript of the work. The Walter herbarium, after being in the possession of the Fraser family for many years after Walter's death in 1788, was presented in 1849 to the Linnaean Society and purchased for fifteen shillings by the British Museum in 1863. The specimens, occupying 117 pages in a large volume, are arranged alphabetically for the most part, with the grasses<sup>1</sup> and the few extant types of Walter's new genera at the end. As already remarked by Britten<sup>2</sup> and Hitchcock,<sup>3</sup> many of Walter's types are missing and some of those which remain are in poor condition. In many cases, in genera wherein Walter described new species as well as Linnaean, no trace of the former can be found, while the latter which could so well be spared are represented by identifiable specimens. Many of the plants are labeled only with the generic name, and, in such cases as that of *Chironia* (= *Sabatia*), whose six species of the *Flora* are represented by seven specimens, it is often a matter of some difficulty to determine which should be considered the types, from the general insufficiency of Walter's descriptions. Even where there is a named specimen it is sometimes, although rarely,

<sup>1</sup> The grasses of the Walter collection have been the subject of a paper by A. S. Hitchcock (16th Rep. Mo. Bot. Gard. 31 (1905)).

<sup>2</sup> Britten, Journ. Bot. xxxvii. 485 (1899).

<sup>3</sup> Hitchcock, 16th Rep. Mo. Bot. Gard. 32 (1905).



unidentifiable, as in the case of *Delphinium carolinianum* Walt., which has been a nomen dubium since its description and is likely to remain so, the type consisting merely of a naked scrap of stem three inches long. But in most cases, with the help of the indications given by Michaux and Elliott, it is possible to identify Walter's species very definitely.

The labels attached to the specimens are, as already mentioned, rather unsatisfactory, many of them bearing only the generic name, and there are frequent evidences of confusion in the collocation of label and specimen. What I take to be Walter's own handwriting is shown on a label without specimen of *Spiraea trifoliata*, and on the labels of *Syntherisma villosa* and *Vincetoxicum*; but most of the remaining labels are in another hand, which from its agreement with some writing on the title page of the volume may be affirmed with considerable certainty to be that of John Fraser himself, into whose keeping the collection passed, presumably on the death of Walter. Mr. James Britten, who has examined the evidence, agrees with me that the authorship of these handwritings may be regarded as practically established. Most of the errors in association of labels and specimen, it should be stated, are in the case of tickets in the handwriting of Fraser.

Although thirty-two new genera were indicated by Walter, only four<sup>1</sup> (*Syntherisma*, *Fraseria*, *Amsonia*, *Vincetoxicum*) were actually named; for all the others the same pseudonym *Anonymos* was used. By far the greater part of these were really new at the time, and nearly all were provided with names by J. F. Gmelin three years later in his (thirteenth) edition of Linnaeus' *Systema*; but most of Gmelin's names were long disused and have been replaced by others now sustained as nomina conservanda by the Vienna Congress. The specific names used by Walter under his twenty-eight genera called *Anonymos* are today kept up where valid (except in a few cases hitherto overlooked), which seems the proper treatment to pursue with them, although it might be assailed with a show of justice in instances where the identical name is given to two or more species in different parts of the Flora. Thus there are four plants called *Anonymos aquaticus*, two called *A. repens*, and six called *A. caroliniensis*.<sup>2</sup> It

<sup>1</sup> A comparison of Walter's description of his *Rajania* (*R. ovata* Walt. = *Brunnichia cirrhosa* Gaertn., published in the same year) with that of Linnaeus is sufficient to prove that the former was not intended by Walter as a new genus.

<sup>2</sup> It may be well to call attention to the fact that this name was always spelt "*caroliniensis*" by Walter, who should be followed in this respect, although most authors who have adopted his names have written it "*carolinensis*."

seems to the writer, however, that these names should not be rejected on the ground of homonymy, since the genera under which they were published, though unfortunately all provided with the same apology for a name, were properly described and differentiated, and the case is therefore not comparable with that of identical specifics in the same genus.

Very many of Walter's new names have been in long-continued use, and some others must remain doubtful on account of the absence of specimens and the insufficiency of Walter's descriptions; but the twenty-odd changes here proposed on the basis of a careful study of Walter's herbarium in connection with his Flora are believed to be beyond reasonable doubt: several indeed have already been proposed by others.

1. *Anonymos caroliniensis* Walt. Fl. Car. p. 60 = **ELYTRARIA CAROLINIENSIS** (Walt.) Pers. Syn. i. 23 (1805). This displaces *E. virgata* Michx. Fl. i. 9, t. 1 (1803). No specimen in Walter Herbarium. The narrow-leaved variety from Florida should be called *E. CAROLINIENSIS* (Walt.) Pers. var. **angustifolia** (Fernald) Blake (*E. virgata* var. *angustifolia* Fernald, Bot. Gaz. xxii. 169 (1896); *Tubiflora carolinensis angustifolia* (Fernald) Small, Fl. S. E. U. S. ed. 1. 1082 (1903)).

2. *Anonymos umbrosus* Walt. p. 63 = **MICRANTHEMUM umbrosum** (Walt.) Blake (*M. orbiculatum* Michx. Fl. i. 10. t. 2 (1803)). No specimen, but the description perfectly definitive of this species.

3. *Anonymos caroliniensis* Walt. p. 91 = **LITHOSPERMUM CAROLINENSE** (Walt.) MacM. Metas. Minn. Vall. 438 (1892) (as *L. carolinense*) displacing *L. Gmelini* (Michx.) Hitchc. (1894). No specimen.

4. *Convolvulus speciosus* Walt. p. 93 = **IPOMOEA SPECIOSA** (Walt.) Hall. fil. Bot. Jahrb. xviii. 143 (1893) (*I. sagittata* Poir. Voy. Barb. ii. 122 (1789)).

5. *Anonymos pinnatus* Walt. p. 103 = **PETALOSTEMUM pinnatum** (Walt.) Blake (*P. corymbosum* Michx. Fl. ii. 50 (1803); *Kuhnistera pinnata* (Walt.) Ktze. Rev. Gen. i. 192 (1891)). A very poor specimen is in the herbarium.

6. **Sium SUAVE** Walt. p. 115 (*S. cicutaefolium* J. F. Gmel. Sys. ed. 13. ii. 482 (1791)). Although *S. cicutaefolium* is quoted in the seventh edition of Gray's Manual (p. 615) as of Schrank, it was first published as a binomial by Gmelin, having been used in a varietal or subspecific sense by Schrank (Baier. Fl. i. 558 (1789)) in the form *Sium Berula*



Gouan III. *cicutaeifolium*, based on the *Sium foliis pinnatis, pinnis lanceolatis, rarius serratis* of J. G. Gmelin (Fl. Sib. i. 201. t. 47 (1747)), from the Obo River in Siberia. J. F. Gmelin's name was based on the same citation from the Flora Sibirica, but he makes no reference to Schrank's name although his own was not improbably founded upon it. Walter's *Sium suave* is evidently the same species and has three years' precedence. There is no specimen so named in the Walter Herbarium, but there is a specimen of this species labeled *Eryngium* in the handwriting attributed to Fraser.

7. *RHEXIA ALIFANUS* Walt. p. 130 (*R. glabella* Michx. Fl. i. 222 (1803)). No specimen. The change here proposed has recently been made by Harper (Bull. Torr. Club, xli. 567 (1914)).

8. *Andromeda reticulata* Walt. p. 137 = *LEUCOTHOE POPULIFOLIA* (Lam.) Dippel, Handb. Laubh. i. 356 (1889).—*Andromeda populifolia* Lam. Ency. i. 159 (1783); *A. lucida* Jacq. Coll. i. 95 (1786) & Icon. i. t. 79 (1781–1786), not *A. lucida* Lam.<sup>1</sup> Ency. i. 157 (1783); *A. acuminata* Ait. Hort. Kew. ii. 70 (1789); *Leucothoe acuminata* (Ait.) G. Don, Gen. Sys. iii. 832 (1834).—The types of *Andromeda reticulata* Walt. and *A. populifolia* Lam., both of which I have examined, represent the species commonly known as *Leucothoe acuminata* (Ait.) G. Don, which must become *L. populifolia* (Lam.) Dippel.

9. *Thymbra*? *caroliniana* Walt. p. 162 = *MACBRIDEA caroliniana* (Walt.) Blake (*M. pulchra* Ell. ex Nutt. Gen. ii. 36 (1818); Ell. Sk. ii. 86 (1824)). Walter's description is definitive of this species, which according to Elliott is abundant in some places in the Carolinas, and his name *Thymbra*? *caroliniana* is unhesitatingly referred by Elliott to his new species. No specimen.

10. *Scutellaria caroliniana* Walt. p. 163 = *SCUTELLARIA OVATA* Hill, Hort. Kew. ed. 1. 242 (1768); ed. 2. 242. t. 8 (1769) (*S. versicolor* Nutt. Gen. ii. 38 (1818)). The synonymy of this species is somewhat confused. The species was described by Hill as *S. ovata* in the first edition of the Hortus Kewensis in 1768; it was redescribed in better fashion and passably figured by Hill as a new species *S. pilosa* in volume xiii. (p. 64. t. 80) of the Vegetable System, which though dated 1773 is known to have been published in the same year (1768) as the Hortus Kewensis. In the second edition of the Hortus, pub-

<sup>1</sup> *LYONIA LUCIDA* (Lam.) K. Koch, Dendr. ii. pt. 1. 118 (1872), replaces *L. nitida* (Bartr.) Fernald, RHODORA x. 53 (1908) (*Andromeda nitida* Bartr. ex Marsh. Arb. 8 (1785)).

lished in 1769, practically a reprint of the first but with the addition of twenty plates reduced from the Vegetable System, the plant reappears as *S. ovata* (p. 242) with a reduced and reversed copy of the plate in the Vegetable System, where it had been called *S. pilosa*. There seems to be no way of deciding definitely as to the priority of the first edition of the Hortus over the thirteenth volume of the System, or vice versa. However, as the twelfth volume of the latter work, published in 1767 (but dated 1773), is quoted at various places in the Hortus, while the thirteenth is not, it seems probable that the Hortus appeared before the thirteenth volume of the System. They were clearly all under preparation at the same time, for some species first published in the twelfth volume (1767) are also published as "Species Novae" in the Hortus of 1768, and reappear under this same title, with the addition of plates from the twelfth volume of the System, in the second edition of the Hortus in 1769, with references to the plates of the twelfth volume. Accordingly it seems wisest to adopt the name *Scutellaria ovata* Hill in place of *S. versicolor* Nutt., particularly since this course permits according to International Rules the retention of the well-known name *S. pilosa* Michx. for that species, which would otherwise require to be changed to *S. ovalifolia* Pers. The types of *S. versicolor* Nutt. and *S. caroliniana* Walt., both in the British Museum, are identical with the plant here taken as *S. ovata* Hill. *S. caroliniana* Poir. (Ency. vii. 106 (1806)), the type of which I have examined at Paris, is *S. integrifolia* L.

In the Hortus Kewensis of Hill his *S. ovata* was described as follows: "Caulis bipedalis, ramosus, subhirsutus. Folia ovata. Flores axillares, rubescentes. Biennis. Ex America boreali. Julio florens." In the System a better description was given: "*Scutellaria Pilosa*. The Leaves are hearted, nurlled, and obtuse: the Twigs are downy. This is a Perennial, native of North America; a Plant of two feet high, flowering in July. The Stalk is brown: the Leaves are of a dull dead green: the Flowers are crimson: and the Seed-vessels of a dusky reddish hue." Despite Hill's description of the flowers as reddish, changed to "crimson" in the System, his character is otherwise so applicable and the peculiar fruit of the species is so naturally, if sketchily, represented in his figure that the identification of his plant with Nuttall's *S. versicolor* seems perfectly safe. Mr. James Britten has kindly called my attention to a fourth publication of this species as new (as *S. pilosa*) by Hill in vol. xvii. (p. 19 t. 20) of the



Vegetable System in 1770 ("1773") where a more detailed description is given.

The variety with enlarged floral bracts, those of the lower flowers 2 cm. long, should be known as *S. OVATA* Hill var. **bracteata** (Benth.) Blake (*S. versicolor* Nutt. var. *bracteata* Benth. Labiat. 433 (1832-1836)). Specimens have been examined from TEXAS: Rio Brazos, 1834, *Drummond* (type coll.: Brit. Mus.); without definite locality, 1846, *Lindheimer* III 492 (Brit. Mus.).

11. *Prasium* ? *purpureum* Walt. p. 166 = **PHYSOSTEGIA purpurea** (Walt.) Blake (*P. denticulata* (Ait.) Britton, Mem. Torr. Club, v. 284 (1894); *Dracocephalum denticulatum* Ait. Hort. Kew. ii. 317 (1789)). Two specimens marked *Prasium* are in the Walter Herbarium (p. 87). The right-hand specimen, with sharply mucronate-serrate lanceolate leaves, which agrees with Walter's description of his *Prasium* ? *incarnatum*, is *Physostegia virginiana* (L.) Benth., while the other, with linear-lanceolate crenate-dentate leaves, typifies *Prasium* ? *purpureum* Walt. and is the same as *Physostegia denticulata* (Ait.) Britton.

12. *Anonymos caroliniensis* Walt. p. 168 = **RUELLIA CAROLINIENSIS** (Walt.) Steud. Nom. ed. 2. ii. 481 (1841) (as *R. carolinensis*), displacing *R. ciliosa* Pursh, Fl. ii. 420 (1814). The small-flowered variety becomes *R. CAROLINIENSIS* (Walt.) Steud. var. **parviflora** (Nees) Blake (*Dipteracanthus ciliosus* (Pursh) Nees γ. *parviflora* Nees in A. DC. Prod. xi. 123 (1847); *R. ciliosa* Pursh var. *ambigua* Gray, Syn. Fl. ii. pt. 1. 326 (1878); *R. ciliosa parviflora* (Nees) Britton, Mem. Torr. Club, v. 300 (1894)). No specimen.

13. *Anonymos cassioides* Walt. p. 171 = **SEYMERIA cassioides** (Walt.) Blake (*S. tenuifolia* Pursh, Fl. ii. 737 (1814); *Afzelia cassioides* (Walt.) J. F. Gmel. Sys. ed. 13. ii. 927 (1791); *Gerardia cassioides* (Walt.) Pers. Syn. ii. 154 (1806<sup>1</sup>)). No specimen in Walter Herbarium. *Seymeria* Pursh (l. c. 736) is a nomen conservandum.

14. **HYPERICUM DENTICULATUM** Walt. p. 190 (*H. virgatum* Lam. Ency. iv. 158 (1797); *H. angulosum* Michx. Fl. ii. 78 (1803)). No specimen, but the description unquestionably applicable to this species. The very narrow-leaved southern form becomes *H. DENTICULATUM* Walt. var. **acutifolium** (Ell.) Blake (*H. acutifolium* Ell. Sk. ii. 26 (1824); *H. virgatum* Lam. var. *acutifolium* (Ell.) Coult.

<sup>1</sup> Although the second volume of Persoon's Synopsis is dated 1807, its first section (pp. 1-272) was issued in the autumn of 1806, as is shown by a review in the Regensb. Bot. Zeit. v. 321 (21 Nov. 1806).



Bot. Gaz. xi. 106 (1886)); the broad-leaved form hitherto chiefly known from New Jersey, of which good specimens collected by Rugel (number 370) in wet swamps of the Swanano Valley, North Carolina, in August 1841, are in the British Museum, becomes *H. DENTICULATUM* Walt. var. **ovalifolium** (Britton) Blake (*H. virgatum ovalifolium* Britton, Trans. N. Y. Acad. Sci. ix. 10 (1889)). Var. *ovalifolium* differs from both the other forms of the species not only in leaf-form but in its larger ovate or elliptic-oblong sepals, but does not seem specifically distinct.

15. *PRENANTHES AUTUMNALIS* Walt. p. 193 (*P. virgata* Michx. Fl. ii. 83 (1803)). A good specimen is in the Walter Herbarium. All authorities, including Michaux himself, have referred Walter's *P. autumnalis* to *P. virgata*, but have failed to adopt the prior name. The *Prenanthes alba*  $\beta$  of Linnaeus (Sp. ii. 798 (1753)), based on Clayton 319, now in the British Museum, is also this species.

16. *Hyoseris biflora* Walt. p. 194 = **KRIGIA biflora** (Walt.) Blake (*Krigia amplexicaulis* (Michx.) Nutt. Gen. ii. 127 (1818); for full synonymy see Standley, Contr. U. S. Nat. Herb. xiii. 356 (1911)). No specimen. |

17. *Chrysocoma acaulis* Walt. p. 196 = **VERNONIA ACAULIS** (Walt.) Gleason, Bull. N. Y. Bot. Gard. iv. 222 (1906) (*V. oligophylla* Michx. Fl. ii. 94 (1803)). No specimen in Walter Herbarium.

18. *Gnaphalium undulatum* Walt. p. 203 (not of L.) = **PTEROCaulon PYCNOSTACHYUM** (Michx.) Ell. Sk. ii. 324 (1824). Walter's *G. undulatum*, a pure misidentification of the Linnaean *G. undulatum* (Sp. ed. 1. ii. 852 (1753); ed. 2. ii. 1197 (1763)), has been taken up by Small as *Chaenolobus undulatus* (Walt.) Small, Fl. S. E. U. S. ed. i. 1236 (1903). This generic name by the way, was not *Chaenolobus* but *Chlaenobolus* (Cass. Diet. Sci. Nat. xlix. 337 (1827)), from  $\chi\lambda\alpha\iota\nu\alpha$  cloak, and  $\beta\acute{\alpha}\lambda\lambda\epsilon\iota\nu$  to throw, in allusion to the deciduous scales of the involucre, and it is antedated by Elliott's *Pterocaulon* of 1824. Walter's misidentification of the Linnaean species has no claim to adoption in nomenclature.

19. *Perdicium semiflosculare*? Walt. p. 204 (not of L.) = **CHAPTALIA TOMENTOSA** Vent. Jard. Cels. 61. t. 61 (1800). Walter's specific name, although printed in italics as was his usual custom with new species, is clearly only intended as a doubtful identification of his plant with *Perdicium semiflosculare* L. (Amoen. Acad. vi. 103 (1763)) from the Cape of Good Hope, the diagnosis of which in the second edition of the Species Plantarum (ii. 1248 (1763)) is quoted nearly

verbatim by Walter, with the addition of a description of the leaves. Although adopted by Kuntze as *Thysanthema semiflosculare* (Walt.) Ktze. (Rev. Gen. i. 369 (1891)), and by Robinson as *Chaptalia semifloscularis* (Walt.) Rob. (Proc. Am. Acad. xlv. 412 (1910)), Walter's name — a mere misidentification of Linnaeus' — should obviously not be adopted to the overthrow of the properly published *Chaptalia tomentosa* Vent. The fact that Linnaeus' species is now treated as a *Gerbera* can have no influence on the invalidity of Walter's use of the name. There is a good specimen in the Walter Herbarium.

20. *ARETHUSA RACEMOSA* Walt. p. 222 = *PONTHIEVA racemosa* (Walt.) Blake (*P. glandulosa* (Sims) R. Br. in Ait. Hort. Kew. ed. 2. v. 200 (1813); *Neottia glandulosa* Sims, Bot. Mag. t. 842 (1805)). There is an excellent specimen in the Walter Herbarium.

21. *Arethusa spicata* Walt. p. 222 = *HEXALECTRIS SPICATA* (Walt.) Barnhart, Torreya, iv. 121 (1904). Walter's name is very properly taken up by Barnhart in place of the later *H. aphylla* (Nutt.) Raf. There is no specimen, but Walter's description is quite distinctive of this species rather than of *Aplectrum hyemale* (Muhl.) Torr., to which his name has been referred by some.

22. *SALIX ALPINA* Walt. p. 243 (*S. tristis* Ait. Hort. Kew. iii. 393 (1789)). This unfortunate change is required by the "International Rules," although not by the "American Rules." The only previous *S. alpina* is of Scopoli, Fl. Carn. ed. 2. 255. t. 61 (1772), described by Scopoli as doubtfully distinct from *S. lanata* L. and *S. fusca* L., and not kept up by any modern author. Andersson (in A. DC. Prod. xvi. pt. 2. 248, 289 (1868)) refers *S. alpina* Scop. in part to *S. Myrsinites* L., in part to *S. Myrsinites* L.  $\beta$  *Jacquiniana* (Willd.) Anders., and in part to *S. arbuscula* L.  $\alpha$  *erecta* Anders. f. 3. *angustifolia* Anders. Walter's homonym is consequently available and must be adopted, inappropriate as it is, according to the "Vienna Rules." Walter's description is clearly of *S. tristis*, and there is a specimen of that species in his herbarium, labeled "*Salix minor* ? of Fraser," not in Walter's hand, which may be considered the type. Fraser's name, which may well have referred to this species, was never published.

The changes here proposed may be summarized in systematic order as follows, the numbers referring to the preceding list:

(20) *PONTHIEVA RACEMOSA* (Walt.) Blake — *P. glandulosa* (Sims) R. Br.

(21) *HEXALECTRIS SPICATA* (Walt.) Barnhart — *H. aphylla* (Nutt.) Raf.



(23) *SALIX ALPINA* Walt. — *S. tristis* Ait.

(5) *PETALOSTEMUM PINNATUM* (Walt.) Blake — *P. corymbosum* Michx.

(14) *HYPERICUM DENTICULATUM* Walt.— *H. virgatum* Lam.

(14) *H. DENTICULATUM* Walt. var. *OVALIFOLIUM* (Britton) Blake — *H. virgatum* Lam. var. *ovalifolium* Britton.

(14) *H. DENTICULATUM* Walt. var. *ACUTIFOLIUM* (Ell.) Blake — *H. virgatum* Lam. var. *acutifolium* (Ell.) Coult.

(7) *RHEXIA ALIFANUS* Walt.— *R. glabella* Michx.

(6) *SIMUM SUAVE* Walt.— *S. cicutae-folium* J. F. Gmel.

(8) *LEUCOTHOE POPULIFOLIA* (Lam.) Dippel — *L. acuminata* (Ait.) G. Don.

(8) *LYONIA LUCIDA* (Lam.) K. Koch — *L. nitida* (Bartr.) Fernald.

(4) *IPOMOEA SPECIOSA* (Walt.) Hall. fil.— *I. sagittata* Poir.

(3) *LITHOSPERMUM CAROLINIENSE* (Walt.) MacM.— *L. Gmelini* (Michx.) Hitchc.

(10) *SCUTELLARIA OVATA* Hill — *S. versicolor* Nutt.

(10) *S. OVATA* Hill var. *BRACTEATA* (Benth.) Blake — *S. versicolor* Nutt. var. *bracteata* Benth.

(9) *MACBRIDEA CAROLINIANA* (Walt.) Blake — *M. pulchra* Ell.

(11) *PHYSOSTEGIA PURPUREA* (Walt.) Blake — *P. denticulata* (Ait.) Britton.

(2) *MICRANTHEMUM UMBROSUM* (Walt.) Blake — *M. orbiculatum* Michx.

(13) *SEYMERIA CASSIOIDES* (Walt.) Blake — *S. tenuifolia* Pursh.

(1) *ELYTRARIA CAROLINIENSIS* (Walt.) Pers.— *E. virgata* Michx.

(1) *E. CAROLINIENSIS* (Walt.) Pers. var. *ANGUSTIFOLIA* (Fernald) Blake — *E. virgata* Michx. var. *angustifolia* Fernald.

(12) *RUELLIA CAROLINIENSIS* (Walt.) Steud.— *R. ciliosa* Pursh.

(12) *R. CAROLINIENSIS* (Walt.) Steud. var. *PARVIFLORA* (Nees) Blake — *R. ciliosa* Pursh var. *parviflora* (Nees) Britton.

(17) *VERNONIA ACAULIS* (Walt.) Gleason — *V. oligophylla* Michx.

(18) *PTEROCAULON PYCNOSTACHYUM* (Michx.) Ell.— *Chaenolobus undulatus* (Walt.) Small.

(19) *CHAPTALIA TOMENTOSA* Vent.— *C. semifloscularis* (Walt.) Rob.

(16) *KRIGIA BIFLORA* (Walt.) Blake — *K. amplexicaulis* (Michx.) Nutt.

(15) *PRENANTHES AUTUMNALIS* Walt.— *P. virgata* Michx.

LONDON, ENGLAND.

## SISYMBRIUM BRACHYCARPON AND ALLIES.

J. FRANCIS MACBRIDE.

DR. EZRA BRAINERD recently sent to the Gray Herbarium for examination some specimens of a *Sisymbrium* collected both in Vermont and New York on the borders of Lake Champlain. These were evidently referable to *S. canescens* Nutt. var. *brachycarpon* (Richards) Wats. as treated in Gray's Manual, Seventh Edition. An examination of the large amount of material now available has led to the conclusion that this plant is specifically distinct from the mostly more southern *S. canescens*. The decidedly greener hue, more deeply segmented leaves, and remote simple viscid or glandular trichomes on the stems toward or quite to the base are characters that seem constant enough over a large area to justify its separation. The southern plant reaches its typical development in the southeastern states, and there is canescent with a soft rather coarse stellate pubescence, especially toward the base, the leaf-segments are short and rounded, and glandulosity, if present, is either confined to the upper portions of the plant or mingled with the pubescence, never standing out as simple distinct trichomes as in *S. brachycarpon*.

Dr. Rydberg, Fl. of Col. 158, gives as a character of *Sophia pinnata* (*S. canescens*), "style obsolete," and in Bull. Torr. Club, xxxiv. 436, after describing *Sophia magna*, writes, "It was first mistaken for *S. brachycarpa*; but the style is evident although short." If we must delimit these species to this extent the above treatment is not correct but it does not seem probable that it will ever be necessary or feasible to sort out *Sisymbrium* specimens, that agree in every other respect, by this method. The style is usually so minute that the question as to whether it is obsolete or evident is of little moment, especially since its relative development seems quite impossible of correlation with the more constant and certainly more striking differences indicated in the preceding paragraph.

Both *S. canescens* and *S. brachycarpon* undergo various modifications when they reach the prairie states and the Rocky Mountains. Without any attempt to clear up the almost inconceivable confusion that involves the numerous segregate species proposed in the West, one or two facts appear reasonably evident and therefore are presented now.



*S. brachycarpon*, particularly in the central-southern Rocky Mountains tends to have on the lower part of the stem a fine stellate puberulence which persists even after the plant has matured fruit. This variation forms part of *Sophia intermedia* Rydb., some specimens having this character being labeled by Dr. Rydberg as belonging to his species. However, *S. intermedia*, as originally described, included Montana specimens quite referable to *S. brachycarpon* and entirely inseparable from typical collections of that species from the northeastern states. The more southern permanently puberulent material, included in the former species by its author, connects the latter species with *S. canescens* on account of its more marked pubescence. Its leaves, however, definitely ally it to *S. brachycarpon*. By placing a limited interpretation on *S. intermedia* Rydb., letting it include only those plants with the more permanent pubescence, it is possible to dispose of a considerable number of collections from the Rocky Mountains that otherwise would have to be referred to *S. brachycarpon* or to *S. canescens* where they would be, in either case, decided misfits. I think, however, that the facts will be more clearly indicated if this plant is regarded as a variety of its nearer relative rather than as a species equally distinct from both.

There is another variation which, unless treated as a species, has been kept as a variety of a plant which is obviously not its nearest relative. This is *S. incisum* Engelm. var. *filipes* Gray, which has the comparatively short clavate pods with the seeds more or less in two rows as in the *S. canescens* group, as pointed out by Dr. Rydberg, Fl. of Col. 157 and Mem. N. Y. Bot. Gard. i. 185. In foliage it is not unlike *S. brachycarpon* except the upper leaf-segments tend to become elongate. The stems are glabrous or slightly cinereous with a minute stellate puberulence. It must, therefore, be regarded as a variety of *S. brachycarpon* rather than of *S. incisum*, a species well marked by its very narrow pods with strictly uniserial seeds.

The plants here discussed may be summarized as follows.

Pods very slender; seeds strictly 1-ranked in each cell...1. *S. incisum*.  
 Pods clavate or subclavate; seeds more or less 2-ranked in each cell.

Plant canescent with a soft stellate- or branched-pubescence; pinnules short and rounded.....2. *S. canescens*.

Plant green or cinereous below with a fine stellate puberulence; pinnules, at least mostly, elongate and slender.

Leaf-segments of about uniform length; fruiting pedicels usually less than 1.5 cm. long.

Glabrate or stellate-puberulent below when young; more or less glandular with simple viscid trichomes toward or quite to the base of the stem.....3. *S. brachycarpon*.

Stellate-puberulent below, rarely throughout, even in age; not glandular toward the base. . . . . 3a. var. *intermedium*.  
 Terminal, and sometimes upper-lateral, leaf-segments much longer than the others and mostly entire; fruiting pedicels often more than 1.5 cm. long. . . . . 3b. var. *filipes*.

1. *SISYMBRIUM INCISUM* Engelm. ex Gray, Pl. Fendl. 8 (1849). Not so common as is generally supposed, a large number of specimens so referred belonging to *S. Sophia* or even to the *S. canescens* group.

2. *SISYMBRIUM CANESCENS* Nutt. Gen. ii. 68 (1818). *S. pinnatum* Walt.) Greene, Bull. Calif. Acad. Sci. ii. 390 (1887), not *S. pinnatum* Barneoud ex C. Gay, Fl. Chile, i. 125. (1845). Specimens examined. SOUTH CAROLINA: in sand, Isle of Palms, Harbor of Charleston, May 2, 1912, *B. L. Robinson* (122). GEORGIA: St. Mary's, Feb. 1873, *C. E. Faxon*. FLORIDA: sandy seashore, Hillsborough Co., March 5, 1905, *A. Fredholm* (6504); weed in cultivated ground, Duval Co., March 20, 1912, *A. Fredholm* (5001); east Florida, *D. C. Eaton*; South Jacksonville, April 8, 1897, *J. R. Churchill*; cultivated ground near Jacksonville, March 22, 1898, *A. H. Curtiss* (6352). OKLAHOMA: sand, Ingersoll, May 6, 1902, *B. F. Bush* (1506). TEXAS: along Corpus Christi Bay, March 21, 1894, *A. A. Heller* (1470); sand, Columbia, March 27, 1900, *B. F. Bush* (450); Limpia Canyon, April 25, 1902, *Tracy & Earle* (244). NEW MEXICO: 1847, *A. Fendler* (32). ARIZONA: Tuscon, Feb. 27, 1907, *F. E. Lloyd*. CALIFORNIA: Antelope Valley, Sept.-Oct. 1878, *J. C. Phillips & C. S. Sargent*; Panamint Mts., Inyo Co., March 30, 1891, *Coville & Funston* (512). WASHINGTON: 1889, *G. R. Vasey* (180).

3. *SISYMBRIUM BRACHYCARPON* Richards. Frankl. 1st Journ. Appendix Ed. 1. 744 (1823). *S. canescens* Nutt. var. *brachycarpon* (Richards) Wats. Bibl. Index N. A. Bot. 69 (1878); *Sophia intermedia* Rydb. Mem. N. Y. Bot. Gard. i. 184 (1900) in part (see discussion above). Specimens examined. QUEBEC: sandy border of salt-marsh near mouth of River Ste. Anne Des Monts, Aug. 3-17, 1905, *J. F. Collins & M. L. Fernald*. MAINE: N. Berwick, May 29, 1902, *J. C. Parlin* (1462). VERMONT: rocky soil, Hog Back Island, Lake Champlain, July 22, 1900, *Nellie F. Flynn*. NEW YORK: cliffs along Lake Champlain, Port Henry, June 13, 1882, *Ezra Brainerd*; Garden Island, Lake Champlain, Aug. 1892, *Ezra Brainerd*; cliffs of Lake Champlain, near Westport, May 6-June 13, 1878, *C. G. Pringle*; Crown Point, May 28, Aug. 12, 1901, *W. W. Eggleston* (2552). ONTARIO: Kingston, June 9, 1902, *J. Fowler*; sand, Pelee Point, Lake Erie, May 27, 1901, *John Macoun* (33, 857). OHIO: Sandusky, May 31, 1903, *W. A. Kellerman*, TENNESSEE: rich bluffs, Knoxville, May 15, 1896, *Albert Ruth* (346). MICHIGAN: shore of Thunder Bay Island, June 18, 1895, *C. F. Wheeler*; Presque Isle, *Houghton*; Belle Isle in Detroit River, June 1898-1900, *O. A. Farwell*. WISCONSIN: Benderville, Brown Co., June 9, 1901, *J. H. Vehnente*. ILLINOIS: dry prairies, Decatur, May 4, 1897, *H. Allan Gleason* (254); Leithon, Lake Co., July 1, 1907, *F. C. Gates* (1717.4);



dry sandy soil, Peoria, June 1904, *F. E. McDonald*; dry clay soil, Mahomet, May, 1901, *H. Allan Gleason* (2379). MINNESOTA: Fort Snelling, June 1, 1891, *Edgar A. Mearns*. IOWA: Armstrong, May 26, 1897, *K. I. Cratty*. MISSOURI: dry woods, Cockerell, May 21, 1912, *B. F. Bush* (6714); Monteer, May 16, 1901, *B. F. Bush* (490). ARKANSAS: sand, Miller Co., April 27, 1902, *B. F. Bush* (1444). NORTH DAKOTA: railroad banks, Leeds, May 24 & June 25, 1901, *Dr. J. Lunell*. KANSAS: sterile ground, Riley Co., 1896, *J. B. Norton* (615); Osborne City, May 19, 1894, *C. L. Shear* (32). OKLAHOMA: along river, Muskogee, April 7, 1908, *Ezra Brainerd*. TEXAS: Dallas Co., April 3, 1901, *J. Reverchon* (2729). ASSINIBOIA: Crane Lake, June 20, 1894, *John Macoun* (3086); Milk River, July 13, 1895, *John Macoun* (10,333). MONTANA: Spanish Creek, May 8, 1901, *J. Vogel*; Bridger Mts., June 11, 1897, *Rydberg & Bessey* (4200); Bozeman, May 20, 1901, *W. W. Jones*. WYOMING: dry soil, Leucite Hills, June 17, 1901, *Merrill & Wilcox* (700). COLORADO: Mancos, June 24, 1898, *Baker, Earle & Tracy* (86); Cimarron, June 7, 1901, *C. F. Baker* (64). OREGON: near Grizzly Butte Camp, June 19, 1894, *J. B. Leiberg* (301). WASHINGTON: Yakima Co., May, 1892, *L. F. Henderson* (2379); Waitsburg, April 28 & May 18, 1897, *R. M. Horner* (77).

3a. *SISYMBRIUM BRACHYCARPON* Richards. var. *intermedium* (Rydb.), n. comb. *Sophia intermedia* Rydb. Mem. N. Y. Bot. Gard. i. 184 (1900) in part (see above discussion). Specimens examined. IDAHO: dry slopes, Hot Hole, East Fork Bruneau, Owyhee Co., July 3, 1912, *Nelson & Macbride*, (1888). WYOMING: Marquette, Aug. 4, 1893, *J. N. Rose* (117); waste ground, Bates Creek, Natrona Co., July 4, 1901, *Leslie N. Goodding* (195) (TYPE); U. S. Penitentiary Reservation, June 16, 1894, *Aven Nelson* (247). COLORADO: dry valley lands, Paradox, Montrose Co., June 17, 1912, *E. P. Walker* (100); Salida, June 19, 1898, *Baker, Earle & Tracy* (16). NEVADA: Carson City, Ormsby Co., June 3, 1902, *C. F. Baker* (970); among the Creosote bushes, Cane Springs, April 6, 1905, *Leslie N. Goodding* (2159); sandy draws, Meadow Valley Wash, April 7, 1905, *Leslie N. Goodding* (2167); Calientes, May 23, 1902, *Leslie N. Goodding* (926).

3b. *SISYMBRIUM BRACHYCARPON* Richards. var. *filipes* (Gray), n. comb. *Sisymbrium incisum* Engelm., var. *filipes* Gray Pl. Fendl. 8. (1849). Specimens examined. SASKATCHEWAN: Touchwood Hills, July 16, 1906, *Macoun & Herriot* (70, 174). IDAHO: dry sagebrush slopes, Twin Falls Co., June 25, 1912, *Nelson & Macbride* (1704). MONTANA: near Pony, July 6, 1897, *Rydberg & Bessey* (4197). WYOMING: Red Desert, Sweetwater Co., June 1, 1897, *Aven Nelson* (3078). NEVADA: Washoe Co., Hunter Creek Canyon, May 24, 1912, *A. A. Heller* (10401). OREGON: Clear Water, *Rev. Spalding* (TYPE). WASHINGTON: Wawawai, May 13, 1893, *C. V. Piper* (1477).

A CORRECTION CONCERNING *SAGITTARIA TERES* WATSON AND *POTAMOGETON LUCENS* L.—Dr. J. C. Phillips published recently (Auk xxviii. 188–200, April, 1911) an article entitled, “Ten years of observation on the migration of Anatidae at Wenham Lake, Massachusetts.” Wenham Lake lies about fifteen miles north of Boston. On page 188, among other pond weeds mentioned as “common to the lake, very kindly identified for me by Mr. W. L. McAtee of the U. S. Biological Survey” are *Sagittaria teres* and *Potamogeton lucens*. As *S. teres* Watson has been recorded but once north of Cape Cod (RHODORA xii. 4, 1910), I wrote to Mr. McAtee, and he very generously sent me all the Wenham Lake specimens of the various species recorded in Dr. Phillips’s article to examine and to keep.

The plant identified as *Sagittaria teres* proves to be the common *Elodea acicularis* (L.) R. & S., a form with the submersed capillary culms from 8 to 12 centimeters in length.

His *Potamogeton lucens* is *P. amplifolius* Tuckerm., a species frequent in the northern half of the Boston District (RHODORA xi. 206, 1909). *P. lucens* L. does occur at Wenham Lake and I have a specimen in my herbarium collected there by J. W. Robbins, no date, but it is a rare plant near Boston (RHODORA xi. 207, 1909), and has not been collected, so far as I know, for a good many years.

Mr. McAtee has very courteously urged me to write this note.—  
WALTER DEANE, Cambridge, Massachusetts.

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A WHITE-FLOWERED SPIRAEA TOMENTOSA.—Professional systematists are, perhaps, too often inclined to ignore color-variation. On the other hand, there is probably no other vegetative phenomenon that plays a larger part in inciting and maintaining the interest of the local flower lover or amateur botanist. No one among us can fail to admit having experienced a certain thrill of delight over the first white Fireweed we chanced upon. However superficial color variation of this kind may be, the fact must remain that nature furnishes few changes that are more striking to the eye or that leave a deeper impression on the mind. How often has the discovery of a favorite plant with petals clothed in an unfamiliar hue added just the needed touch of excitement to a day a-field!

Treated subjectively rather than objectively, then, this kind of



variation is surely often worthy a name, especially when a series of collections indicate that it is not uncommon. Such seems to be the case with a white-flowered *Spiraea tomentosa*, which, although its existence was noted at least as long ago as 1862, as shown by a specimen in the Gray Herbarium, has more recently been brought to notice by some excellent specimens communicated by Miss E. F. Fletcher of Westford, Massachusetts. Besides several collections at hand that indicate its range, there is the following reference in a list of "Further Additions to the Flora of Middlesex County, Mass.," published in RHODORA, i. 223 (1899) by Alfred W. Hosmer. "*Spiraea tomentosa* L. White-flowered form, found in Carlisle."

Accordingly, I am proposing for this white-flowered form the name

SPIRAEA TOMENTOSA L. f. **albiflora**, f. n., corolla alba.—Specimens examined. MASSACHUSETTS: Forge Village, Prescott Meadow, Westford, July 19, 1914, Miss E. F. Fletcher (TYPE); Sherborn, Aug. 3, 1909, Miss M. L. Loomis; Hawley, July, 1906, W. P. Brooks; Williamstown, 1862, Prof. Chadbourne. NEW HAMPSHIRE: dry hillside, Alstead, July 30, 1899, M. L. Fernald (162); Alstead, July 28, 1901, E. F. Williams; Lower Baker Pond, Wentworth, Aug. 1, 1908, E. F. Williams.—J. FRANCIS MACBRIDE, Gray Herbarium.

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BOTRYCHIUM LANCEOLATUM IN THE YELLOWSTONE.—Professor Fernald in his recent article in RHODORA on *Botrychium angustisegmentum*, when speaking of the occurrence of *Botrychium lanceolatum* in the West, gives the distribution of this latter species as extending from the Aleutian Islands to Mt. Ranier in Washington and the Selkirks in British Columbia. South and east of these mountain stations he says its occurrence is doubtful. In this connection I should like to note that I collected this plant on August 17, 1914, in the Yellowstone National Park, Wyoming, growing in the woods along the edge of the Yellowstone River near Yellowstone Lake.—F. W. HUNNEWELL, 2d, Wellesley.

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THE FIELD MEETING OF THE VERMONT BOTANICAL AND BIRD CLUBS will be held at St. Johnsbury, July 6-10, 1915, under the auspices of the Fairbanks Museum of Natural History. Excursions will be made to an extensive tamarack swamp, to some cool bogs and

cedar swamps at Danville, to the "Nine Island Region" at Barnet, to Saddleback Mountain, Lunenburg, and Twenty-Mile Fall in the Connecticut at Waterford. A cordial invitation is extended to all members of the clubs included in the New England Federation of Natural History Societies. For details of trips, lodging places, rates, &c., address any of the following Committee.

ALICE W. WILCOX, St. Johnsbury, Vt.

INEZ A. HOWE, St. Johnsbury, Vt.

MABEL A. SHIELDS, St. Johnsbury, Vt.

W. E. BALCH, Lunenburg, Vt.

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THE TWENTIETH ANNIVERSARY OF THE NEW YORK BOTANICAL GARDEN will be commemorated at the Garden during the week commencing September 6, 1915. Botanists from all parts of North America are invited to attend. A highly attractive programme is announced, including addresses, scientific papers, opportunities for the inspection of the grounds and buildings, also excursions to examine characteristic parts of coastal vegetation of Staten Island, pine barrens of New Jersey, etc., under the guidance of the Torrey Botanical Club.

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